Acta Malacologica Inquisitionis Volume 1(4), 27 August 2024

Nerita taiwanensis Thach, 2023: a synonym of *Nerita* (*Linnerita*) *polita* Linnaeus, 1758

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ABSTRACT

In 2023 N.N. Thach published his book "New shells of South Asia and Japan, Taiwan, China", which included descriptions of 1 new genus, 1 new subgenus and 123 new species and subspecies. One of his new species is Nerita *taiwanensis* Thach, 2023. The figure in his book is of a very poor quality, but photos of the holotype provided by the Muséum National d'Histoire Naturelle (Paris) clearly show a specimen of *Nerita polita* Linnaeus, 1758. Therefore the new name introduced by Thach and based on one specimen only is a junior synonym of the well-known species *Nerita polita*.

Gastropoda, Neritidae, *Nerita*, synonymy, Taiwan

INTRODUCTION

In 2023 N.N. Thach published his book "New Shells of South Asia and Japan, Taiwan, China". This is a next book in similar style as several of his previous books. He named 123 new species and subspecies, but it seems that he has created many synonyms. If these new names remain the valid name for species after a careful study of the descriptions and (usually poor photographs) is in many cases doubtful. Herein, as a collector / specialist on Neritidae, I only treat his new species *Nerita taiwanensis* Thach, 2023.

Abbreviations:
MNHN — Muséum National d'Histoire Naturelle, Paris.

TAXONOMY

Class Gastropoda Cuvier, 1795
Subclass Neritimorpha Golikov & Starobogatov, 1975
Superfamily Neritoidea Rafinesque, 1815
Family Neritidae Rafinesque, 1815
Subfamily Neritininae Poey, 1852
Genus *Nerita* Linnaeus, 1758
Subgenus *Linnerita* Vermeij, 1984
Nerita polita Linnaeus, 1758 (type by original designation)

Nerita taiwanensis* Thach, 2023, new synonym of *Nerita polita Linnaeus, 1758
(Figs. 1)

Nerita taiwanensis – Thach, 2023: 19, pl. 9 fig. 79 upper row.

Type material: holotype (20 mm long, 15 mm wide), Muséum National d'Histoire Naturelle, Paris, no. MNHN-IM-2000-38137, Type locality Taiwan, Orchid Island, Habitat: at intertidal area.

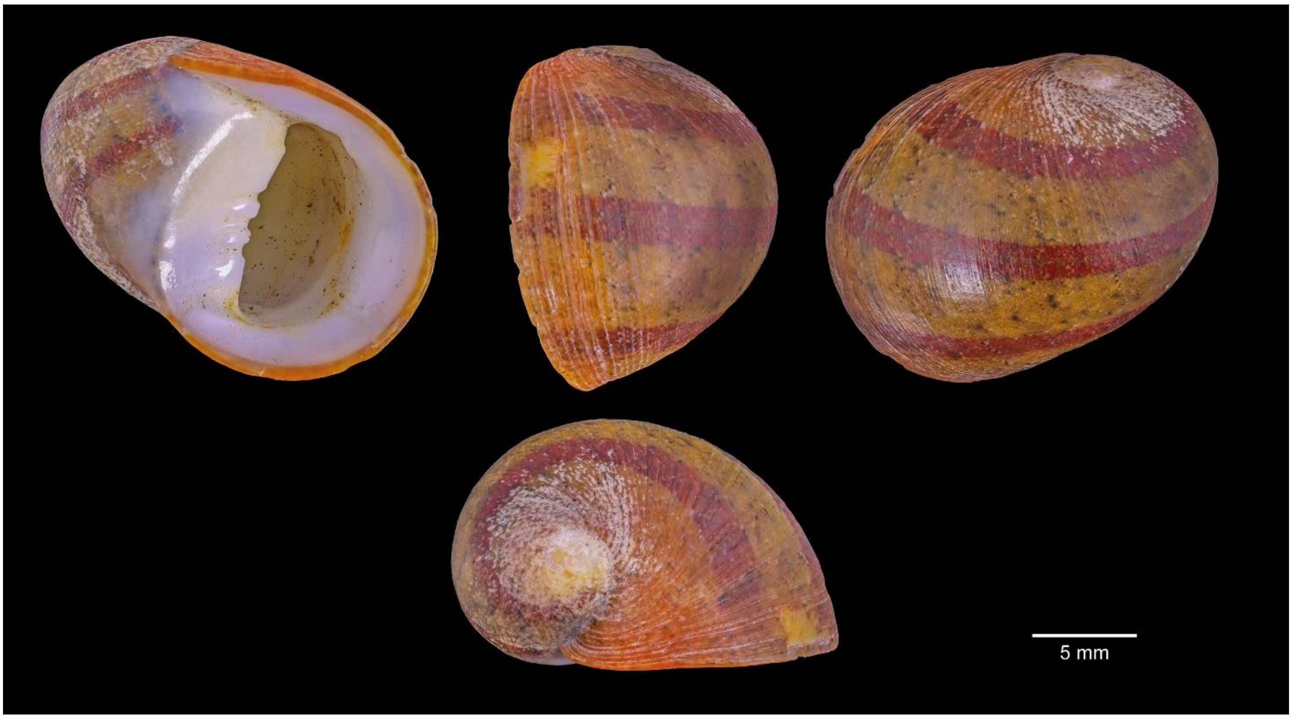


Fig. 1. Holotype of *Nerita taiwanensis* Thach, 2023. MNHN-IM-2000-38137. Photo courtesy Ms. P. Gaël Bourguignon, MNHN.

Discussion. – As Thach is already active in the field of malacology for several decades, it is disappointing that he did not reviewed earlier literature before describing this new species. In his references important sources are absent: Krijnen et al. (1999), Eichhorst & Neville (2004), Eichhorst (2016). The first two sources already give excellent descriptions, but especially Eichhorst (2016) provides us with detailed descriptions and plates of all known species of Neritidae with their variations and forms.

It is curious that Thach does not compare his new species with species that include Taiwan in their distribution. He compared his supposed new species with *Nerita erythrostoma* Eichhorst & Neville, 2004 (Thach, 2023: 19, pl. 9 fig. 79 lower row; Western Australia, NMR 75515, photo by Trausel & Slieker), which is restricted to northern Australia and with *Nerita orbignyana* Récluz, 1841 (Thach, 2023: 19, pl. 10 fig. 87, photo by H. Dekker), a species only to be found from the Red Sea to the Persian Gulf. The *Nerita* species belonging to the subgenus *Linnerita* known from Taiwan are *Nerita antiquata* Récluz, 1841, *Nerita litterata* Gmelin, 1791 and *Nerita polita* Linnaeus, 1758 (**Fig. 2**). A comparison with these three species would have been more appropriate. It is quite remarkable that many images of shells in the book of Thach are of very poor quality, but this is consistent with his earlier books. In the case of *Nerita taiwanensis* (Thach, 2023: fig. 79), it looks like that the holotype has a smooth concave parietal shelf and small columellar teeth, which points towards *Nerita litterata* as possible identification. But the excellent photos of the holotype of *Nerita taiwanensis* show clearly that there are no spiral cords present on the first teleoconch whorls, and the columella has one large square upper tooth and 2 or 3 weak central teeth. Only one *Linnerita* species qualifies to be identical: *Nerita polita* Linnaeus, 1758.

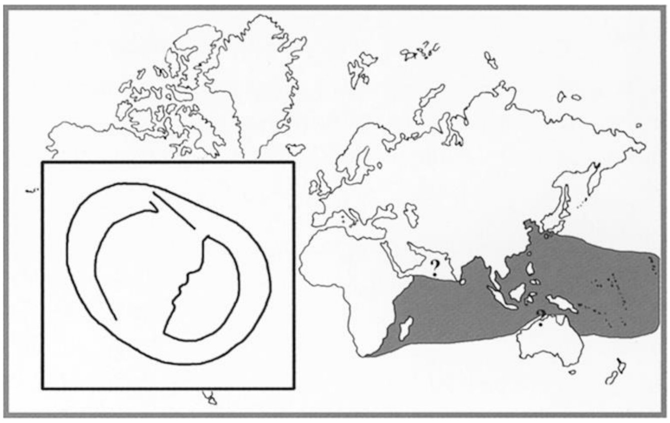


Fig. 2. Distribution map of *Nerita polita* (Eichhorst, 2016: 553).

Many species of *Nerita* are known to be quite variable in color and color patterns. It is therefore strange that Thach based his description on just one specimen, especially as this species is common in Taiwan. The color form of the holotype of Thach's new species is similar to some of the many color forms figured by Eichhorst (2016: pl. 168 figs 25,34; **Fig. 3**).

For a comparison of all *Linnerita* species see **Table 1.** Eichhorst (2016) mentions as key identification features for *Nerita polita*: the operculum, no spiral cords on the first teleoconch whorls, a smooth, convex to flat parietal shelf, and on the columella one large square upper tooth and 2 or 3 weak central teeth.

Conclusion. – In the light of the discussion above, I conclude that the supposed new species name *Nerita taiwanensis* Thach, 2023 is a junior synonym of *Nerita polita* Linnaeus, 1758.

ACKNOWLEDGEMENTS

First of all I want to thank Mrs. V. Heros for informing me on getting type photos and Ms. P. Gaël Bourguignon (MNHN) for photographing the holotype of *Nerita taiwanensis*. Thanks to Tom Eichhorst for his permission to use parts of his book Neritidae of the World (2016). Also thanks to Henk Dekker for his suggestions on an earlier draft of the manuscript and to Rob Vink for improving the quality of the photos and plates, and for commenting on the manuscript.

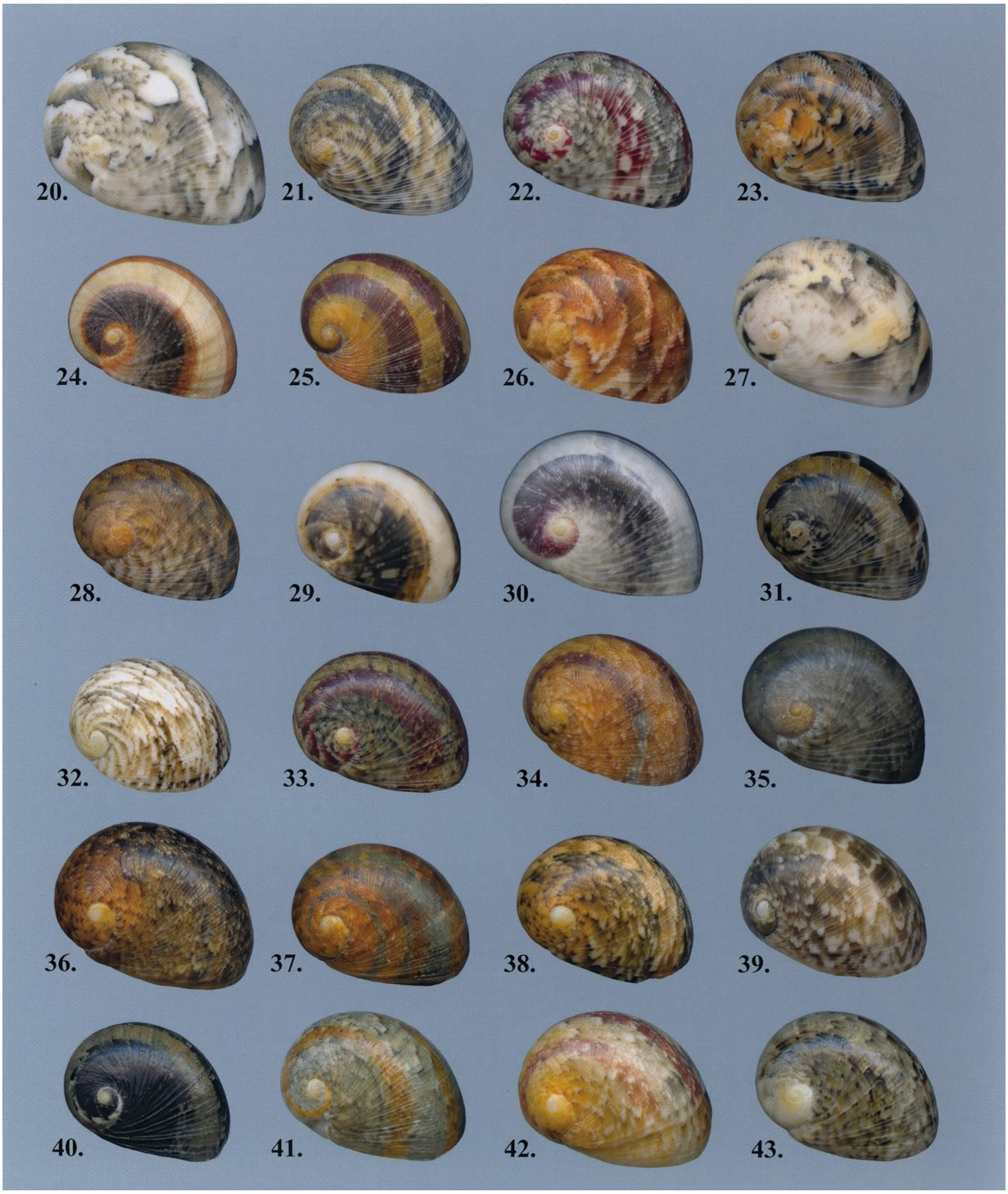
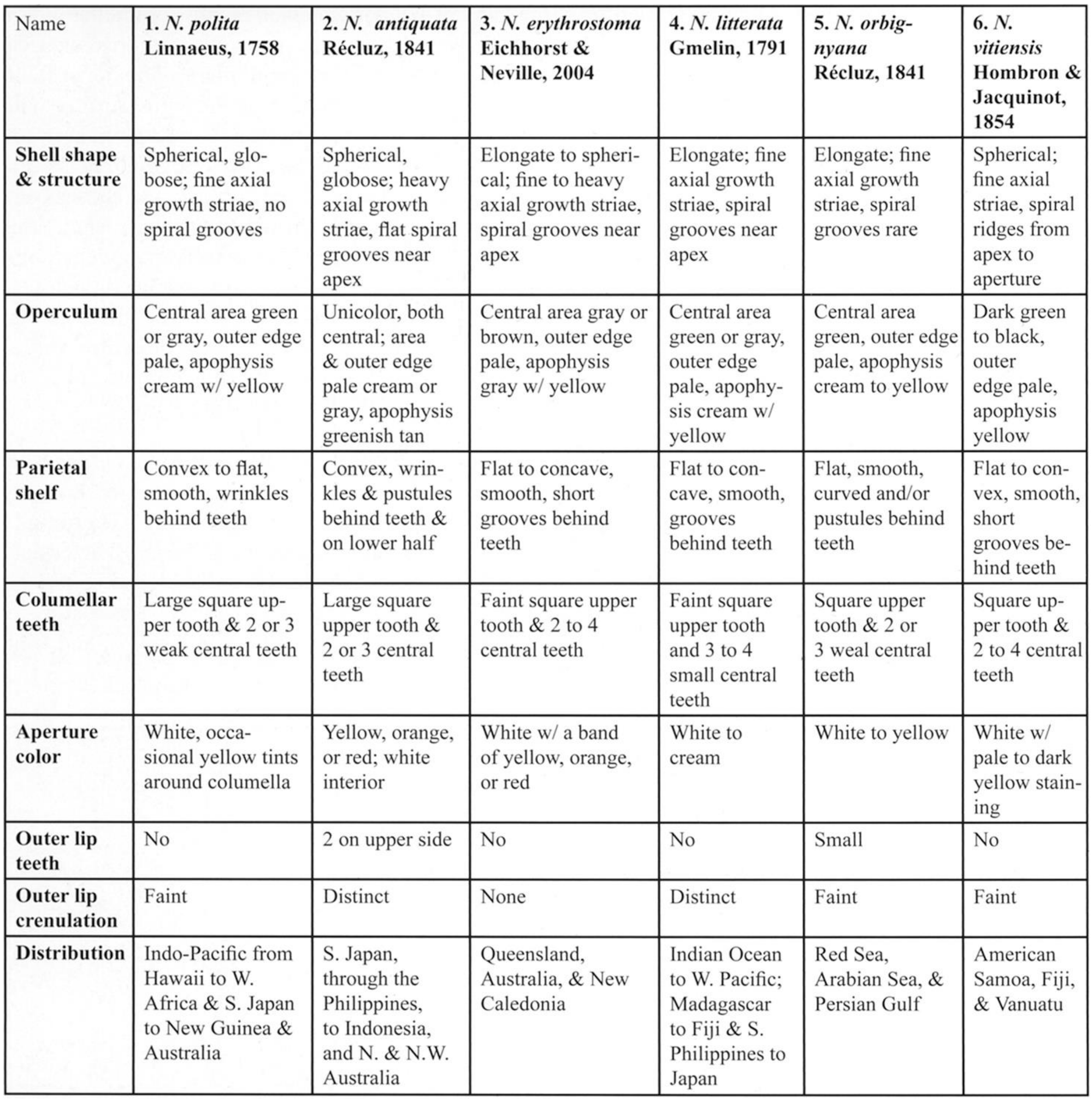


Fig 3. *Nerita* (*Linnerita*) *polita* Linnaeus, 1758 (Eichhorst, 2016: 663, plate 168). **Figs 20-23.** Sizes 26-30 mm, Philippines. **Figs 24-43.** Sizes 25-29 mm, Thailand, Andaman Sea

EDITORIAL NOTES
Editor in charge: Aart Dekkers.

Table 1. Characteristics for identification of species within the subgenus *Linnerita* (Eichhorst, 2016: 514).



Name	**1. *N. polita* Linnaeus, 1758**	**2. *N. antiquata* Récluz, 1841**	**3. *N. erythrostoma* Eichhorst & Neville, 2004**	**4. *N. litterata* Gmelin, 1791**	**5. *N. orbignyana* Récluz, 1841**	**6. *N. vitiensis* Hombron & Jacquinot, 1854**
Shell shape & structure	Spherical, globose; fine axial growth striae, no spiral grooves	Spherical, globose; heavy axial growth striae, flat spiral grooves near apex	Elongate to spherical; fine to heavy axial growth striae, spiral grooves near apex	Elongate; fine axial growth striae, spiral grooves near apex	Elongate; fine axial growth striae, spiral grooves rare	Spherical; fine axial striae, spiral ridges from apex to aperture
Operculum	Central area green or gray, outer edge pale, apophysis cream w/ yellow	Unicolor, both central; area & outer edge pale cream or gray, apophysis greenish tan	Central area gray or brown, outer edge pale, apophysis gray w/ yellow	Central area green or gray, outer edge pale, apophysis cream w/ yellow	Central area green, outer edge pale, apophysis cream to yellow	Dark green to black, outer edge pale, apophysis yellow
Parietal shelf	Convex to flat, smooth, wrinkles behind teeth	Convex, wrinkles & pustules behind teeth & on lower half	Flat to concave, smooth, short grooves behind teeth	Flat to concave, smooth, grooves behind teeth	Flat, smooth, curved and/or pustules behind teeth	Flat to convex, smooth, short grooves behind teeth
Columellar teeth	Large square upper tooth & 2 or 3 weak central teeth	Large square upper tooth & 2 or 3 central teeth	Faint square upper tooth & 2 to 4 central teeth	Faint square upper tooth and 3 to 4 small central teeth	Square upper tooth & 2 or 3 weal central teeth	Square upper tooth & 2 to 4 central teeth
Aperture color	White, occasional yellow tints around columella	Yellow, orange, or red; white interior	White w/ a band of yellow, orange, or red	White to cream	White to yellow	White w/ pale to dark yellow staining
Outer lip teeth	No	2 on upper side	No	No	Small	No
Outer lip crenulation	Faint	Distinct	None	Distinct	Faint	Faint
Distribution	Indo-Pacific from Hawaii to W. Africa & S. Japan to New Guinea & Australia	S. Japan, through the Philippines, to Indonesia, and N. & N.W. Australia	Queensland, Australia, & New Caledonia	Indian Ocean to W. Pacific; Madagascar to Fiji & S. Philippines to Japan	Red Sea, Arabian Sea, & Persian Gulf	American Samoa, Fiji, & Vanuatu

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